Conference on Disarmament

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Subsidiary Body 3: Prevention of an arms race in outer space

Report

(Adopted at the 1470th plenary meeting on 5 September 2018)

I. Current scenario

A. Outer space, peace and security

1. Many intervening members have formulated the need for the CD in its work on PAROS to be guided by the objectives of maintaining a safe, secure, stable and sustainable outer space, and preventing outer space from becoming an area of conflict. Technological developments that are revolutionizing the uses of outer space, together with the expansion of access beyond the traditional spacefaring powers and state actors are both an opportunity and a risk, especially if new capabilities, uses, vulnerabilities and threats are not well understood, monitored and adequately framed

B. Existing normative and institutional framework

2. There was strong emphasis on the Outer Space Treaty as the centerpiece of the legal regime governing the use of outer space for peaceful purposes. Delegations also mentioned the important role of COPUOS as the UN's mandated norm creating body for the peaceful uses of outer space. References were also made to the UN Disarmament Commission's work on the implementation of non-legally binding TCBMs in outer space activities as well as to the role of the UNGA, which has for over 30 years adopted annually resolutions for the prevention of an arms race in outer space. Several delegations emphasized the work of the Group of Governmental Experts (GGE) on outer space TCBMs — whose report was adopted by consensus by the UN General Assembly in July 2013, as well as the ongoing GGE established by Resolution 72/250 to "consider and make recommendations on substantial elements of an international legally binding instrument on the prevention of an arms race in outer space, including, inter alia, on the prevention of the placement of weapons in outer space".

3. Mindful of the mandate of the Conference on Disarmament, there was a general view that the work of the CD on PAROS should build upon and complement the existing normative framework, maintaining full consistency with it. The work of the CD should not duplicate ongoing efforts in other fora, but it should address specific disarmament aspects of some of the same issues.

4. Overarching principles stemming from the OST and other applicable international law, such as that space should be used for peaceful purposes in accordance with international law, and that the exploration and use of outer space must be carried out for the

benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and that it shall be the province of mankind, are considered to be key. Full adherence to and implementation of existing agreements applicable to outer space are essential.

C. Threats

5. Growth in the amount of human space-activity, coupled with the increased diversity of space operators, fuels the perception that the space domain is becoming increasingly congested and contested. Delegations have expressed concerns both over actions which could trigger misinterpretations and miscalculations as well as over the deliberate and intentional use of force in outer space, from outer space or from terrestrial platforms against outer space objects.

1. Weaponisation of outer space

6. Some delegations pointed at the weaponisation of outer space as their primary concern when dealing with the issue of PAROS. The point was made that, absent legally binding prohibitions, there will always be a risk that conventional or other new types of weaponry can appear in outer space at any moment. The weaponisation of outer space could impair, possibly irreversibly, the peaceful exploration of outer space, give rise to an arms race and negatively impact the global strategic balance and stability, as well as states' security.

2. ASATs

7. Some delegations expressed grave concern over the pursuit and use of anti-satellite (ASAT) capabilities. Preventing the development and testing of those capabilities, including those terrestrially based, is a matter of urgency for such delegations. The use or testing of ASATs could create long-lasting clouds of debris which could impair the long-term sustainability of outer space activities. A number of delegations noted that the draft PPWT does not address the use of ASATs, while some other delegations were of the view that the PPWT's provisions on the use of force against space objects deal with this aspect.

3. Other threats (jamming, blinding, collision as a weapon, etc.)

8. During the discussions, other threats to peace and security in outer space were evoked. Delegations and experts mentioned the use of electronic warfare to overwhelm satellites and affect their functioning; the use of laser beams to damage optical sensors; the possibility of using satellite-servicing space objects to move or damage space objects; and the possibility of using a deliberate and intentional collision as a means of damaging or destroying a space object. The point was made that the technology behind at least some of these threats is dual-use by nature. There are systems that have legitimate, beneficial uses, but that are also inherently capable of being used to interfere with other operators' space systems, adding further layers of complexity to risk and threat assessments and possible regulation.

II. PAROS toolbox

A. Role and sufficiency of existing regulations

9. For some, the existing legal framework, specifically the Outer Space Treaty, is sufficient in addressing PAROS. The outer space treaties provide common ground, and fully adhering to and implementing the existing framework would be of essence. Practicable measures to implement space-related principles and guidelines endorsed on the basis of consensus by the United Nations General Assembly seem to garner widespread support. But the contrast between the speedy development and changes in outer space activities and the relatively slower process of development of rules, norms and standards applicable to them can potentially generate gaps that may need to be addressed. For others,

therefore, the existing treaties are insufficient to keep outer space safe and secure by reducing vulnerabilities to threats and risks and preventing what could amount to an arms race in outer space, and additional international rules would be called for.

10. Some delegations were of the view that there is a fundamental question as to whether the existing treaties on outer space are sufficient to deal with the generally perceived growing risks and threats associated with an arms race in outer space. They noted that the existing treaties only prohibit nuclear weapons and other weapons of mass destruction from being placed, and tested, in outer space. They recalled that there is no prohibition regarding placement of conventional weapons in space or the use of ground-based weapons against space assets and that there is no prohibition on the development and testing of these weapons. Against this backdrop, these delegations were of the view PAROS should be discussed and pursued in conformity with the provisions of the Outer Space Treaty, which serves as the cornerstone of the legal regime applicable to outer space.

1. Definitions

11. The substantive matter of what constitutes a peaceful use of outer space in order to identify and sanction non-peaceful uses of outer space that are threatening or hostile has been put forward, thus highlighting an inherent interplay between the CD and the Committee on the Peaceful uses of Outer Space – COPUOS, and the need for a coordinated approach to space issues across the spectrum of UN bodies and relevant space fora and expertise.

12. The definition of items/objects to be controlled and behavior to be regulated seems to be important for an effective and verifiable agreement preventing the placement of weapons in outer space, alongside restrictions on undesirable behavior within the context of PAROS. Terms would have to be carefully defined so as not to unintentionally capture objects or behaviors that should not be constrained, and in order to safeguard peaceful and beneficial activities in outer space. Such definitions should meet a high standard of clarity from a technical, legal and political standpoint, should necessarily be consensual, and should be construed in a manner that would not stifle legitimate space activities nor lead to disagreement/misperceptions that can create uncertainty as to compliance, and possibly foment tensions and conflict, instead of preventing or mitigating them. The challenges involved therein have been highlighted, with the view being expressed that at the current juncture it is not possible to craft definitions that would satisfy everyone's concerns and not unduly or unfairly constrain civil or commercial space activities. Others, however, assume that there would be no inherent obstacle to formulating and agreeing on definitions that could meet the objectives stated above, with specific language being proposed. The draft PPWT, for instance, defines "weapon in space" as "any outer space object or component thereof which has been produced or converted to destroy, damage or disrupt the normal functioning of objects in outer space…", though there is no agreement on this proposal.

2. Self-defense

13. Mention has been made to Article 51 of the UN Charter to the effect that it establishes the inherent right of individual or collective self-defense if an armed attack occurs. On the other hand, some thought greater clarity should be sought with respect to its relevance and applicability to PAROS as a matter of international law. For some delegations the applicability of the inherent right to individual or collective self-defense in outer space, in accordance with Article 51 of the UN Charter, defeats the purpose and object of PAROS. For these delegations, there is an inherent inconsistency between the use of force in outer space, including for self-defense, and the prevention of an arms race in outer space.

B. Risk reduction

14. Working together to reduce risks to space objects in their role as critical global infrastructure and ensuring within UN disarmament fora that everyone can benefit from the use of space has been considered important. For some delegations, the use of force, in

particular destructive force, should be discussed in the CD in the context of PAROS, including in connection with the risk it poses of increasing long lasting debris in space that may harmfully interfere with activities of other states and affect space security. There seems to be concern that misinterpretation of intensions behind certain actions in outer space in today's more challenging security landscape may trigger dangerous miscalculations, adding an element of risk against the backdrop of what some members describe as the return to great power competition.

15. Some seem to support addressing the responsible behavior of states in respect of PAROS, rather than dealing with certain actions or weapons. There is the approach that irresponsible behavior is of concern to all states, and that safety, security and sustainability of outer space needs to be protected by all states and for all states. The point was made that principles of responsible behavior should be globally shaped using universal, multilateral, and non-discriminatory approaches in the relevant fora. Views were expressed that norms that build transparency and trust can strengthen existing international standards governing outer space, increase mutual understanding and reduce tensions. It was recalled that such norms can be legally or non-legally binding.

C. TCBMS

16. TCBMs have been generally considered as relevant and necessary for PAROS. Delegations supported the consensus outcome of the 2013 GGE and expressed satisfaction with the UNDC taking up work on practical recommendations for the implementation of the recommendations contained in that report with the goal of preventing an arms race in outer space. Though concerns have been expressed with respect to duplication, some members see TCBMs, including codes of conduct, as also relevant for the CD to discharge its mandate on one of the core issues of its agenda. TCBMs are considered by some delegations a potential interim near-term outcome in the CD, without prejudice to or as an intermediate step towards other subsequent more substantive undertakings, including legally binding obligations.

17. TCBMs have also been described, by some, as a complement to other initiatives, including a comprehensive, effective, and verifiable legally binding treaty. TCBMs, according to them, would spur trust and confidence amongst members and, in this respect, could be considered a stepping-stone towards the negotiation of new norms on PAROS in the CD. Some who recognize the value of TCBMs espouse the view, however, that they cannot be a substitute for legally-binding treaty-based obligations. For others, TCBMs could also be pursued within a legally-binding agreement/agreements.

18. Cooperative approaches to information sharing, common and practical approaches to specific standards, processes, and practices, timeliness of critical information about space objects and hazards, as well as other political measures such as unilateral declarations, bilateral commitments, a multilateral code of conduct and best practices were mentioned by some delegations as options to be further explored. References were also made to UNGA resolutions, commitments, and pledges regarding no first placement of weapons in outer space. The evolution of the NFP initiative into a multilateral configuration has been underlined, although doubts were raised with regard to the practical value of NFP, particularly if decoupled from other issues of concern. Some delegations expressed the view that it is not possible to confirm a country's adherence to NFP.

19. Capacity-building and international cooperation, particularly for developing countries, though the domain of COPUOS in the context of the peaceful uses of outer space, could also be relevant as a contribution to PAROS, independently of the degree of commitment one decides to pursue within the CD, whether TCBMs only, a legally-binding treaty or some combination of both. The prevention of an arms race in outer space is critical to ensure the use of outer space, including the moon and other celestial bodies for peaceful purposes and for the benefit of all countries, independently of their levels of economic and scientific development. Capacity building and international cooperation towards this goal seem to be an important component of any undertaking in the CD on PAROS.

D. Legally binding measures

1. PPWT

20. Several members consider the draft PPWT as a basis for the negotiation of a legally binding treaty in the CD, notwithstanding the need to deepen discussions on many questions regarding the proposal. Some members caution against placing the burden of any such treaty asymmetrically upon developing countries or discriminatory restrictions being raised against their peaceful use of outer space. For some delegations, the only way to avert the dangers associated with the weaponisation of outer space is to adopt effective legally binding measures on PAROS in the CD. Though the PPWT is not considered by proponents to solve all issues related to space security, they maintain that a space free of weapons would be a key contribution towards this goal, as well as prohibiting any hostile action against space objects. Some other delegations insist that the PPWT is fundamentally flawed by not being equitable, effectively verifiable and that it negatively impacts their national security. As a basis for the consideration of a treaty, the draft PPWT is currently the only proposal made in the CD.

2. Verification and monitoring

21. There is support for the development of a verification regime, and, for some, monitoring, whatever the agreement envisioned. For some, the idea of dealing with verification issues in a sequenced approach, through protocols to be elaborated/negotiated ex-post, is insufficient, and the view was expressed that effective verification for a PAROS instrument would not be achievable at the present time.

22. Views were also expressed that voluntary TCBMs could lay the foundation for future verification/monitoring of legally binding commitments.

III. Way forward

A. Complementarity of different approaches and possible pathways for progress

23. There is a shared concern regarding the increasing threats to peace and security in outer space and a common understanding that an arms race in outer space would gravely affect the global security landscape. Even though approaches to address these issues differ, there is a sense of urgency which indicates that progress on PAROS is not only possible, but necessary. Elements of commonality between member States include the necessity to reduce risks and increase confidence, widespread concern with the formation of space debris from tests or the use of force in outer space, concern with the possibility of the weaponization of outer space and dealing with the dual-use nature of many space objects, the positive role of TCBMs, the importance of verification/monitoring, and of capacity building and international cooperation. Although consensus on the immediate negotiation of a legally binding instrument could not be established, and there were some doubts about the feasibility of such an instrument, particularly with regard to the issues of definitions, verification and dual use technologies, relevant and substantive elements for further consideration of the CD may be extracted from the discussions.

B. Issues for possible further consideration in the CD

- Reducing risks to space objects and their vital role to prevent conflict, ensuring that the exploration and use of outer space should be carried on for the benefit of all peoples.
- Preventing misinterpretation of intentions behind certain actions in outer space that may trigger dangerous miscalculations in today's increasingly volatile space security landscape exposed to great power competition.

- Definitions:
  - Outer Space (important but perhaps not indispensable for making normative progress).
  - objects / behavior to be controlled, limited or prohibited;
  - a weapon in space;
  - terrestrially-based weapons that threaten space security;
  - peaceful versus non-peaceful, threatening or hostile uses of outer space.
- Reducing the threat to space security posed by dual-use space and terrestrially-based objects.
- Reducing threats to space security from lasting debris and from systems of debris collection.

  Safeguarding legitimate space activities against ambiguous normative constructs related to PAROS that may stifle their development.
- Effective arms control, limitation or prohibition measures that would contribute to PAROS, and their scope (development, testing, transfer, possession, placement, deployment, use, etc.), addressing space and terrestrially-based capabilities as well as cyber capabilities.
- Verification and monitoring with respect to PAROS-related undertakings.
- Deepening discussions on UN Charter's Article 51 (and other relevant elements of international law) in the context of PAROS.
- Capacity-building and international cooperation dimensions of PAROS to the benefit, in particular, of developing countries.
- Options for an agreement or agreements on PAROS in the CD, recognizing options can be built upon and are not mutually exclusive.